

2/2 - (C) PAJ / JPO  
PN - JP1225674 A 19890908  
AP - JP19880053353 19880307  
PA - SUMITOMO METAL IND LTD  
IN - IKISHIMA KENJI; others: 02  
I - C09D3/78 ; C09J5/02  
TI - SURFACE MODIFICATION OF STEEL SHEET COATED WITH FLUOROCARBON RESIN  
AB - PURPOSE: To obtain a coated steel sheet excellent in adhesiveness to a silicone caulking compound without priming, by coating a steel with a fluorocarbon resin coating, stoving this coating and irradiating the coated surface with an actinic radiation.  
- CONSTITUTION: A steel sheet is coated with a fluorocarbon coating, and this coating is stoved. The coated surface is irradiated with an actinic radiation. Said actinic radiation means a radiation which can excite and activate a fluorocarbon coating and includes ultraviolet rays, electron beams or the like. Since this surface modification process comprises irradiating a surface coated with a fluorocarbon coating with ultraviolet rays or the like, the molecules on the coated surface are excited by the energy of ultraviolet rays or the like to generate polar groups. The presence of these polar groups can increase the adhesive force of the coated surface to a caulking compound.  
GR - C662  
- 013549  
ABD - 19891207

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 2000351809  
PUBLICATION DATE : 19-12-00

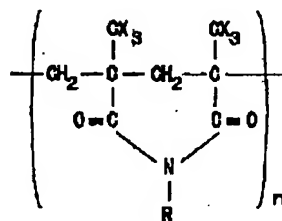
APPLICATION DATE : 15-11-99  
APPLICATION NUMBER : 11324358

APPLICANT : OKI ELECTRIC IND CO LTD;

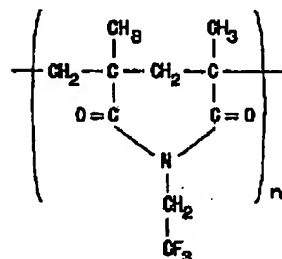
INVENTOR : MAENO KIMINORI;

INT.CL. : C08F 8/30 C08F 20/10 G02B 1/04  
G02B 6/12 G02B 6/13

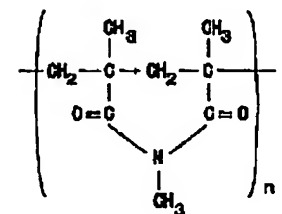
TITLE : POLYMERIC MATERIAL FOR OPTICAL  
COMMUNICATION, ITS SYNTHESIS,  
AND OPTICAL WAVEGUIDE USING  
THE MATERIAL



I



II



III

ABSTRACT : PROBLEM TO BE SOLVED: To obtain a polymeric material for optical communication having higher heat resistance than polymethyl methacrylate and being excellent in the easiness of controlling a refractive index by selecting a polymeric material containing a compound having a specified structure.

SOLUTION: This material contains a compound represented by formula I and having a weight-average molecular weight of 10,000-1,000,000, has more excellent heat resistance than polymethyl methacrylate, and is exemplified by a compound represented by e.g. formula II or III. A compound represented by formula I is obtained by heating under agitation a solution prepared by dissolving polymethyl methacrylate and 2,2,2-trifluoroethylamine in a solvent such as N-methylpyrrolidone to form a reaction solution, adding the reaction solution dropwise to water to form a precipitate, and separating it by filtration. A compound represented by formula III is obtained by dissolving polymethyl methacrylate and a methylamine/methanol solution in a solvent such as N-methylpyrrolidone, heating the mixture under agitation to form a reaction solution, and adding the reaction solution dropwise to water to form a precipitate. In the formulae, R is an alkyl or a phenyl; X is hydrogen, deuterium or a halogen; and n is the degree of polymerization.

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